

AMENDMENTS TO THE SEQUENCE LISTING

IN THE SEQUENCE LISTING

Please replace the Sequence Listing of record with the Substitute Sequence Listing enclosed herewith.



SEQUENCE LISTING

<10> MIYATA, Toshiyuki
KOKAME, Koichi

<120> SUBSTRATES SPECIFIC TO VON WILLEBRAND FACTOR CLEAVING PROTEASE AND METHOD OF ASSAYING THE ACTIVITY

<130> 0020-5363PUS1

<140> US 10/531,427
<141> 2005-04-15

<150> PCT/JP02/10816
<151> 2002-10-18

<160> 12

<210> 1
<211> 2813
<212> PRT
<213> Homo sapiens

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Ala Arg Cys Ser Leu Phe Gly Ser Asp Phe Val Asn Thr Phe Asp Gly
35 40 45
Ser Met Tyr Ser Phe Ala Gly Tyr Cys Ser Tyr Leu Leu Ala Gly Gly
50 55 60
Cys Gln Lys Arg Ser Phe Ser Ile Ile Gly Asp Phe Gln Asn Gly Lys
65 70 75 80
Arg Val Ser Leu Ser Val Tyr Leu Gly Glu Phe Phe Asp Ile His Leu
85 90 95
Phe Val Asn Gly Thr Val Thr Gln Gly Asp Gln Arg Val Ser Met Pro
100 105 110
Tyr Ala Ser Lys Gly Leu Tyr Leu Glu Thr Glu Ala Gly Tyr Tyr Lys
115 120 125
Leu Ser Gly Glu Ala Tyr Gly Phe Val Ala Arg Ile Asp Gly Ser Gly
130 135 140
Asn Phe Gln Val Leu Leu Ser Asp Arg Tyr Phe Asn Lys Thr Cys Gly
145 150 155 160
Leu Cys Gly Asn Phe Asn Ile Phe Ala Glu Asp Asp Phe Met Thr Gln
165 170 175
Glu Gly Thr Leu Thr Ser Asp Pro Tyr Asp Phe Ala Asn Ser Trp Ala
180 185 190
Leu Ser Ser Gly Glu Gln Trp Cys Glu Arg Ala Ser Pro Pro Ser Ser
195 200 205
Ser Cys Asn Ile Ser Ser Gly Glu Met Gln Lys Gly Leu Trp Glu Gln
210 215 220
Cys Gln Leu Leu Lys Ser Thr Ser Val Phe Ala Arg Cys His Pro Leu
225 230 235 240
Val Asp Pro Glu Pro Phe Val Ala Leu Cys Glu Lys Thr Leu Cys Glu
245 250 255
Cys Ala Gly Gly Leu Glu Cys Ala Cys Pro Ala Leu Leu Glu Tyr Ala

260	265	270
Arg Thr Cys Ala Gln Glu Gly Met Val Leu Tyr Gly Trp Thr Asp His		
275	280	285
Ser Ala Cys Ser Pro Val Cys Pro Ala Gly Met Glu Tyr Arg Gln Cys		
290	295	300
Val Ser Pro Cys Ala Arg Thr Cys Gln Ser Leu His Ile Asn Glu Met		
305	310	315
Cys Gln Glu Arg Cys Val Asp Gly Cys Ser Cys Pro Glu Gly Gln Leu		
325	330	335
Leu Asp Glu Gly Leu Cys Val Glu Ser Thr Glu Cys Pro Cys Val His		
340	345	350
Ser Gly Lys Arg Tyr Pro Pro Gly Thr Ser Leu Ser Arg Asp Cys Asn		
355	360	365
Thr Cys Ile Cys Arg Asn Ser Gln Trp Ile Cys Ser Asn Glu Glu Cys		
370	375	380
Pro Gly Glu Cys Leu Val Thr Gly Gln Ser His Phe Lys Ser Phe Asp		
385	390	395
Asn Arg Tyr Phe Thr Phe Ser Gly Ile Cys Gln Tyr Leu Leu Ala Arg		
405	410	415
Asp Cys Gln Asp His Ser Phe Ser Ile Val Ile Glu Thr Val Gln Cys		
420	425	430
Ala Asp Asp Arg Asp Ala Val Cys Thr Arg Ser Val Thr Val Arg Leu		
435	440	445
Pro Gly Leu His Asn Ser Leu Val Lys Leu Lys His Gly Ala Gly Val		
450	455	460
Ala Met Asp Gly Gln Asp Val Gln Leu Pro Leu Leu Lys Gly Asp Leu		
465	470	475
Arg Ile Gln His Thr Val Thr Ala Ser Val Arg Leu Ser Tyr Gly Glu		
485	490	495
Asp Leu Gln Met Asp Trp Asp Gly Arg Gly Arg Leu Leu Val Lys Leu		
500	505	510
Ser Pro Val Tyr Ala Gly Lys Thr Cys Gly Leu Cys Gly Asn Tyr Asn		
515	520	525
Gly Asn Gln Gly Asp Asp Phe Leu Thr Pro Ser Gly Leu Ala Glu Pro		
530	535	540
Arg Val Glu Asp Phe Gly Asn Ala Trp Lys Leu His Gly Asp Cys Gln		
545	550	555
Asp Leu Gln Lys Gln His Ser Asp Pro Cys Ala Leu Asn Pro Arg Met		
565	570	575
Thr Arg Phe Ser Glu Glu Ala Cys Ala Val Leu Thr Ser Pro Thr Phe		
580	585	590
Glu Ala Cys His Arg Ala Val Ser Pro Leu Pro Tyr Leu Arg Asn Cys		
595	600	605
Arg Tyr Asp Val Cys Ser Cys Ser Asp Gly Arg Glu Cys Leu Cys Gly		
610	615	620
Ala Leu Ala Ser Tyr Ala Ala Ala Cys Ala Gly Arg Gly Val Arg Val		
625	630	635
Ala Trp Arg Glu Pro Gly Arg Cys Glu Leu Asn Cys Pro Lys Gly Gln		
645	650	655
Val Tyr Leu Gln Cys Gly Thr Pro Cys Asn Leu Thr Cys Arg Ser Leu		
660	665	670
Ser Tyr Pro Asp Glu Glu Cys Asn Glu Ala Cys Leu Glu Gly Cys Phe		
675	680	685
Cys Pro Pro Gly Leu Tyr Met Asp Glu Arg Gly Asp Cys Val Pro Lys		
690	695	700
Ala Gln Cys Pro Cys Tyr Tyr Asp Gly Glu Ile Phe Gln Pro Glu Asp		
705	710	715
		720

Ile Phe Ser Asp His His Thr Met Cys Tyr Cys Glu Asp Gly Phe Met
 725 730 735
 His Cys Thr Met Ser Gly Val Pro Gly Ser Leu Leu Pro Asp Ala Val
 740 745 750
 Leu Ser Ser Pro Leu Ser His Arg Ser Lys Arg Ser Leu Ser Cys Arg
 755 760 765
 Pro Pro Met Val Lys Leu Val Cys Pro Ala Asp Asn Leu Arg Ala Glu
 770 775 780
 Gly Leu Glu Cys Thr Lys Thr Cys Gln Asn Tyr Asp Leu Glu Cys Met
 785 790 795 800
 Ser Met Gly Cys Val Ser Gly Cys Leu Cys Pro Pro Gly Met Val Arg
 805 810 815
 His Glu Asn Arg Cys Val Ala Leu Glu Arg Cys Pro Cys Phe His Gln
 820 825 830
 Gly Lys Glu Tyr Ala Pro Gly Glu Thr Val Lys Ile Gly Cys Asn Thr
 835 840 845
 Cys Val Cys Arg Asp Arg Lys Trp Asn Cys Thr Asp His Val Cys Asp
 850 855 860
 Ala Thr Cys Ser Thr Ile Gly Met Ala His Tyr Leu Thr Phe Asp Gly
 865 870 875 880
 Leu Lys Tyr Leu Phe Pro Gly Glu Cys Gln Tyr Val Leu Val Gln Asp
 885 890 895
 Tyr Cys Gly Ser Asn Pro Gly Thr Phe Arg Ile Leu Val Gly Asn Lys
 900 905 910
 Gly Cys Ser His Pro Ser Val Lys Cys Lys Lys Arg Val Thr Ile Leu
 915 920 925
 Val Glu Gly Glu Ile Glu Leu Phe Asp Gly Glu Val Asn Val Lys
 930 935 940
 Arg Pro Met Lys Asp Glu Thr His Phe Glu Val Val Glu Ser Gly Arg
 945 950 955 960
 Tyr Ile Ile Leu Leu Gly Lys Ala Leu Ser Val Val Trp Asp Arg
 965 970 975
 His Leu Ser Ile Ser Val Val Leu Lys Gln Thr Tyr Gln Glu Lys Val
 980 985 990
 Cys Gly Leu Cys Gly Asn Phe Asp Gly Ile Gln Asn Asn Asp Leu Thr
 995 1000 1005
 Ser Ser Asn Leu Gln Val Glu Glu Asp Pro Val Asp Phe Gly Asn Ser
 1010 1015 1020
 Trp Lys Val Ser Ser Gln Cys Ala Asp Thr Arg Lys Val Pro Leu Asp
 1025 1030 1035 1040
 Ser Ser Pro Ala Thr Cys His Asn Asn Ile Met Lys Gln Thr Met Val
 1045 1050 1055
 Asp Ser Ser Cys Arg Ile Leu Thr Ser Asp Val Phe Gln Asp Cys Asn
 1060 1065 1070
 Lys Leu Val Asp Pro Glu Pro Tyr Leu Asp Val Cys Ile Tyr Asp Thr
 1075 1080 1085
 Cys Ser Cys Glu Ser Ile Gly Asp Cys Ala Cys Phe Cys Asp Thr Ile
 1090 1095 1100
 Ala Ala Tyr Ala His Val Cys Ala Gln His Gly Lys Val Val Thr Trp
 1105 1110 1115 1120
 Arg Thr Ala Thr Leu Cys Pro Gln Ser Cys Glu Glu Arg Asn Leu Arg
 1125 1130 1135
 Glu Asn Gly Tyr Glu Cys Glu Trp Arg Tyr Asn Ser Cys Ala Pro Ala
 1140 1145 1150
 Cys Gln Val Thr Cys Gln His Pro Glu Pro Leu Ala Cys Pro Val Gln
 1155 1160 1165
 Cys Val Glu Gly Cys His Ala His Cys Pro Pro Gly Lys Ile Leu Asp

1170	1175	1180
Glu Leu Leu Gln Thr Cys Val Asp Pro Glu Asp Cys Pro Val Cys Glu		
1185	1190	1195
Val Ala Gly Arg Arg Phe Ala Ser Gly Lys Lys Val Thr Leu Asn Pro		1200
1205	1210	1215
Ser Asp Pro Glu His Cys Gln Ile Cys His Cys Asp Val Val Asn Leu		
1220	1225	1230
Thr Cys Glu Ala Cys Gln Glu Pro Gly Gly Leu Val Val Pro Pro Thr		
1235	1240	1245
Asp Ala Pro Val Ser Pro Thr Thr Leu Tyr Val Glu Asp Ile Ser Glu		
1250	1255	1260
Pro Pro Leu His Asp Phe Tyr Cys Ser Arg Leu Leu Asp Leu Val Phe		
1265	1270	1275
Leu Leu Asp Gly Ser Ser Arg Leu Ser Glu Ala Glu Phe Glu Val Leu		1280
1285	1290	1295
Lys Ala Phe Val Val Asp Met Met Glu Arg Leu Arg Ile Ser Gln Lys		
1300	1305	1310
Trp Val Arg Val Ala Val Val Glu Tyr His Asp Gly Ser His Ala Tyr		
1315	1320	1325
Ile Gly Leu Lys Asp Arg Lys Arg Pro Ser Glu Leu Arg Arg Ile Ala		
1330	1335	1340
Ser Gln Val Lys Tyr Ala Gly Ser Gln Val Ala Ser Thr Ser Glu Val		
1345	1350	1355
Leu Lys Tyr Thr Leu Phe Gln Ile Phe Ser Lys Ile Asp Arg Pro Glu		
1365	1370	1375
Ala Ser Arg Ile Ala Leu Leu Leu Met Ala Ser Gln Glu Pro Gln Arg		
1380	1385	1390
Met Ser Arg Asn Phe Val Arg Tyr Val Gln Gly Leu Lys Lys Lys		
1395	1400	1405
Val Ile Val Ile Pro Val Gly Ile Gly Pro His Ala Asn Leu Lys Gln		
1410	1415	1420
Ile Arg Leu Ile Glu Lys Gln Ala Pro Glu Asn Lys Ala Phe Val Leu		
1425	1430	1435
Ser Ser Val Asp Glu Leu Glu Gln Gln Arg Asp Glu Ile Val Ser Tyr		
1445	1450	1455
Leu Cys Asp Leu Ala Pro Glu Ala Pro Pro Pro Thr Leu Pro Pro His		
1460	1465	1470
Met Ala Gln Val Thr Val Gly Pro Gly Leu Leu Gly Val Ser Thr Leu		
1475	1480	1485
Gly Pro Lys Arg Asn Ser Met Val Leu Asp Val Ala Phe Val Leu Glu		
1490	1495	1500
Gly Ser Asp Lys Ile Gly Glu Ala Asp Phe Asn Arg Ser Lys Glu Phe		
1505	1510	1515
Met Glu Glu Val Ile Gln Arg Met Asp Val Gly Gln Asp Ser Ile His		
1525	1530	1535
Val Thr Val Leu Gln Tyr Ser Tyr Met Val Thr Val Glu Tyr Pro Phe		
1540	1545	1550
Ser Glu Ala Gln Ser Lys Gly Asp Ile Leu Gln Arg Val Arg Glu Ile		
1555	1560	1565
Arg Tyr Gln Gly Gly Asn Arg Thr Asn Thr Gly Leu Ala Leu Arg Tyr		
1570	1575	1580
Leu Ser Asp His Ser Phe Leu Val Ser Gln Gly Asp Arg Glu Gln Ala		
1585	1590	1595
Pro Asn Leu Val Tyr Met Val Thr Gly Asn Pro Ala Ser Asp Glu Ile		
1605	1610	1615
Lys Arg Leu Pro Gly Asp Ile Gln Val Val Pro Ile Gly Val Gly Pro		
1620	1625	1630

Asn Ala Asn Val Gln Glu Leu Glu Arg Ile Gly Trp Pro Asn Ala Pro
 1635 1640 1645
 Ile Leu Ile Gln Asp Phe Glu Thr Leu Pro Arg Glu Ala Pro Asp Leu
 1650 1655 1660
 Val Leu Gln Arg Cys Cys Ser Gly Glu Gly Leu Gln Ile Pro Thr Leu
 1665 1670 1675 1680
 Ser Pro Ala Pro Asp Cys Ser Gln Pro Leu Asp Val Ile Leu Leu
 1685 1690 1695
 Asp Gly Ser Ser Ser Phe Pro Ala Ser Tyr Phe Asp Glu Met Lys Ser
 1700 1705 1710
 Phe Ala Lys Ala Phe Ile Ser Lys Ala Asn Ile Gly Pro Arg Leu Thr
 1715 1720 1725
 Gln Val Ser Val Leu Gln Tyr Gly Ser Ile Thr Thr Ile Asp Val Pro
 1730 1735 1740
 Trp Asn Val Val Pro Glu Lys Ala His Leu Leu Ser Leu Val Asp Val
 1745 1750 1755 1760
 Met Gln Arg Glu Gly Gly Pro Ser Gln Ile Gly Asp Ala Leu Gly Phe
 1765 1770 1775
 Ala Val Arg Tyr Leu Thr Ser Glu Met His Gly Ala Arg Pro Gly Ala
 1780 1785 1790
 Ser Lys Ala Val Val Ile Leu Val Thr Asp Val Ser Val Asp Ser Val
 1795 1800 1805
 Asp Ala Ala Ala Asp Ala Ala Arg Ser Asn Arg Val Thr Val Phe Pro
 1810 1815 1820
 Ile Gly Ile Gly Asp Arg Tyr Asp Ala Ala Gln Leu Arg Ile Leu Ala
 1825 1830 1835 1840
 Gly Pro Ala Gly Asp Ser Asn Val Val Lys Leu Gln Arg Ile Glu Asp
 1845 1850 1855
 Leu Pro Thr Met Val Thr Leu Gly Asn Ser Phe Leu His Lys Leu Cys
 1860 1865 1870
 Ser Gly Phe Val Arg Ile Cys Met Asp Glu Asp Gly Asn Glu Lys Arg
 1875 1880 1885
 Pro Gly Asp Val Trp Thr Leu Pro Asp Gln Cys His Thr Val Thr Cys
 1890 1895 1900
 Gln Pro Asp Gly Gln Thr Leu Leu Lys Thr His Arg Val Asn Cys Asp
 1905 1910 1915 1920
 Arg Gly Leu Arg Pro Ser Cys Pro Asn Ser Gln Ser Pro Val Lys Val
 1925 1930 1935
 Glu Glu Thr Cys Gly Cys Arg Trp Thr Cys Pro Cys Val Cys Thr Gly
 1940 1945 1950
 Ser Ser Thr Arg His Ile Val Thr Phe Asp Gly Gln Asn Phe Lys Leu
 1955 1960 1965
 Thr Gly Ser Cys Ser Tyr Val Leu Phe Gln Asn Lys Glu Gln Asp Leu
 1970 1975 1980
 Glu Val Ile Leu His Asn Gly Ala Cys Ser Pro Gly Ala Arg Gln Gly
 1985 1990 1995 2000
 Cys Met Lys Ser Ile Glu Val Lys His Ser Ala Leu Ser Val Glu Leu
 2005 2010 2015
 His Ser Asp Met Glu Val Thr Val Asn Gly Arg Leu Val Ser Val Pro
 2020 2025 2030
 Tyr Val Gly Gly Asn Met Glu Val Asn Val Tyr Gly Ala Ile Met His
 2035 2040 2045
 Glu Val Arg Phe Asn His Leu Gly His Ile Phe Thr Phe Thr Pro Gln
 2050 2055 2060
 Asn Asn Glu Phe Gln Leu Gln Leu Ser Pro Lys Thr Phe Ala Ser Lys
 2065 2070 2075 2080
 Thr Tyr Gly Leu Cys Gly Ile Cys Asp Glu Asn Gly Ala Asn Asp Phe

2085	2090	2095
Met Leu Arg Asp Gly Thr Val Thr Asp Trp Lys Thr Leu Val Gln		
2100	2105	2110
Glu Trp Thr Val Gln Arg Pro Gly Gln Thr Cys Gln Pro Ile Leu Glu		
2115	2120	2125
Glu Gln Cys Leu Val Pro Asp Ser Ser His Cys Gln Val Leu Leu Leu		
2130	2135	2140
Pro Leu Phe Ala Glu Cys His Lys Val Leu Ala Pro Ala Thr Phe Tyr		
2145	2150	2155
Ala Ile Cys Gln Gln Asp Ser Cys His Gln Glu Gln Val Cys Glu Val		
2165	2170	2175
Ile Ala Ser Tyr Ala His Leu Cys Arg Thr Asn Gly Val Cys Val Asp		
2180	2185	2190
Trp Arg Thr Pro Asp Phe Cys Ala Met Ser Cys Pro Pro Ser Leu Val		
2195	2200	2205
Tyr Asn His Cys Glu His Gly Cys Pro Arg His Cys Asp Gly Asn Val		
2210	2215	2220
Ser Ser Cys Gly Asp His Pro Ser Glu Gly Cys Phe Cys Pro Pro Asp		
2225	2230	2235
Lys Val Met Leu Glu Gly Ser Cys Val Pro Glu Glu Ala Cys Thr Gln		
2245	2250	2255
Cys Ile Gly Glu Asp Gly Val Gln His Gln Phe Leu Glu Ala Trp Val		
2260	2265	2270
Pro Asp His Gln Pro Cys Gln Ile Cys Thr Cys Leu Ser Gly Arg Lys		
2275	2280	2285
Val Asn Cys Thr Thr Gln Pro Cys Pro Thr Ala Lys Ala Pro Thr Cys		
2290	2295	2300
Gly Leu Cys Glu Val Ala Arg Leu Arg Gln Asn Ala Asp Gln Cys Cys		
2305	2310	2315
Pro Glu Tyr Glu Cys Val Cys Asp Pro Val Ser Cys Asp Leu Pro Pro		
2325	2330	2335
Val Pro His Cys Glu Arg Gly Leu Gln Pro Thr Leu Thr Asn Pro Gly		
2340	2345	2350
Glu Cys Arg Pro Asn Phe Thr Cys Ala Cys Arg Lys Glu Glu Cys Lys		
2355	2360	2365
Arg Val Ser Pro Pro Ser Cys Pro Pro His Arg Leu Pro Thr Leu Arg		
2370	2375	2380
Lys Thr Gln Cys Cys Asp Glu Tyr Glu Cys Ala Cys Asn Cys Val Asn		
2385	2390	2395
Ser Thr Val Ser Cys Pro Leu Gly Tyr Leu Ala Ser Thr Ala Thr Asn		
2405	2410	2415
Asp Cys Gly Cys Thr Thr Thr Cys Leu Pro Asp Lys Val Cys Val		
2420	2425	2430
His Arg Ser Thr Ile Tyr Pro Val Gly Gln Phe Trp Glu Glu Gly Cys		
2435	2440	2445
Asp Val Cys Thr Cys Thr Asp Met Glu Asp Ala Val Met Gly Leu Arg		
2450	2455	2460
Val Ala Gln Cys Ser Gln Lys Pro Cys Glu Asp Ser Cys Arg Ser Gly		
2465	2470	2475
Phe Thr Tyr Val Leu His Glu Gly Glu Cys Cys Gly Arg Cys Leu Pro		
2485	2490	2495
Ser Ala Cys Glu Val Val Thr Gly Ser Pro Arg Gly Asp Ser Gln Ser		
2500	2505	2510
Ser Trp Lys Ser Val Gly Ser Gln Trp Ala Ser Pro Glu Asn Pro Cys		
2515	2520	2525
Leu Ile Asn Glu Cys Val Arg Val Lys Glu Glu Val Phe Ile Gln Gln		
2530	2535	2540

Arg Asn Val Ser Cys Pro Gln Leu Glu Val Pro Val Cys Pro Ser Gly
 2545 2550 2555 2560
 Phe Gln Leu Ser Cys Lys Thr Ser Ala Cys Cys Pro Ser Cys Arg Cys
 2565 2570 2575
 Glu Arg Met Glu Ala Cys Met Leu Asn Gly Thr Val Ile Gly Pro Gly
 2580 2585 2590
 Lys Thr Val Met Ile Asp Val Cys Thr Thr Cys Arg Cys Met Val Gln
 2595 2600 2605
 Val Gly Val Ile Ser Gly Phe Lys Leu Glu Cys Arg Lys Thr Thr Cys
 2610 2615 2620
 Asn Pro Cys Pro Leu Gly Tyr Lys Glu Glu Asn Asn Thr Gly Glu Cys
 2625 2630 2635 2640
 Cys Gly Arg Cys Leu Pro Thr Ala Cys Thr Ile Gln Leu Arg Gly Gly
 2645 2650 2655
 Gln Ile Met Thr Leu Lys Arg Asp Glu Thr Leu Gln Asp Gly Cys Asp
 2660 2665 2670
 Thr His Phe Cys Lys Val Asn Glu Arg Gly Glu Tyr Phe Trp Glu Lys
 2675 2680 2685
 Arg Val Thr Gly Cys Pro Pro Phe Asp Glu His Lys Cys Leu Ala Glu
 2690 2695 2700
 Gly Gly Lys Ile Met Lys Ile Pro Gly Thr Cys Cys Asp Thr Cys Glu
 2705 2710 2715 2720
 Glu Pro Glu Cys Asn Asp Ile Thr Ala Arg Leu Gln Tyr Val Lys Val
 2725 2730 2735
 Gly Ser Cys Lys Ser Glu Val Glu Val Asp Ile His Tyr Cys Gln Gly
 2740 2745 2750
 Lys Cys Ala Ser Lys Ala Met Tyr Ser Ile Asp Ile Asn Asp Val Gln
 2755 2760 2765
 Asp Gln Cys Ser Cys Cys Ser Pro Thr Arg Thr Glu Pro Met Gln Val
 2770 2775 2780
 Ala Leu His Cys Thr Asn Gly Ser Val Val Tyr His Glu Val Leu Asn
 2785 2790 2795 2800
 Ala Met Glu Cys Lys Cys Ser Pro Arg Lys Cys Ser Lys
 2805 2810

<210> 2
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 2

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Gln	Val	Thr	Val	Gly	Pro	Gly	Leu	Leu	Gly	Val	Ser	Thr	Leu	Gly	Pro
				20					25				30		
Lys	Arg	Asn	Ser	Met	Val	Leu	Asp	Val	Ala	Phe	Val	Leu	Glu	Gly	Ser
				35					40				45		
Asp	Lys	Ile	Gly	Glu	Ala	Asp	Phe	Asn	Arg	Ser	Lys	Glu	Phe	Met	Glu
				50					55				60		
Glu	Val	Ile	Gln	Arg	Met	Asp	Val	Gly	Gln	Asp	Ser	Ile	His	Val	Thr
				65					70				80		
Val	Leu	Gln	Tyr	Ser	Tyr	Met	Val	Thr	Val	Glu	Tyr	Pro	Phe	Ser	Glu
				85					90				95		
Ala	Gln	Ser	Lys	Gly	Asp	Ile	Leu	Gln	Arg	Val	Arg	Glu	Ile	Arg	Tyr
				100					105				110		
Gln	Gly	Gly	Asn	Arg	Thr	Asn	Thr	Gly	Leu	Ala	Leu	Arg	Tyr	Leu	Ser

115	120	125
Asp His Ser Phe Leu Val Ser Gln Gly Asp Arg Glu Gln Ala Pro Asn		
130	135	140
Leu Val Tyr Met Val Thr Gly Asn Pro Ala Ser Asp Glu Ile Lys Arg		
145	150	155
Leu Pro Gly Asp Ile Gln Val Val Pro Ile Gly Val Gly Pro Asn Ala		
165	170	175
Asn Val Gln Glu Leu Glu Arg Ile Gly Trp Pro Asn Ala Pro Ile Leu		
180	185	190
Ile Gln Asp Phe Glu Thr Leu Pro Arg Glu Ala Pro Asp Leu Val Leu		
195	200	205
Gln Arg		
210		

<210> 3
<211> 115
<212> PRT
<213> Homo sapiens

<400> 3		
Glu Ala Gln Ser Lys Gly Asp Ile Leu Gln Arg Val Arg Glu Ile Arg		
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Ser Asp His Ser Phe Leu Val Ser Gln Gly Asp Arg Glu Gln Ala Pro		
35	40	45
Asn Leu Val Tyr Met Val Thr Gly Asn Pro Ala Ser Asp Glu Ile Lys		
50	55	60
Arg Leu Pro Gly Asp Ile Gln Val Val Pro Ile Gly Val Gly Pro Asn		
65	70	75
Ala Asn Val Gln Glu Leu Glu Arg Ile Gly Trp Pro Asn Ala Pro Ile		
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Leu Ile Gln Asp Phe Glu Thr Leu Pro Arg Glu Ala Pro Asp Leu Val		
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Leu Gln Arg		
115		

<210> 4
<211> 82
<212> PRT
<213> Homo sapiens

<400> 4		
Asp His Ser Phe Leu Val Ser Gln Gly Asp Arg Glu Gln Ala Pro Asn		
1	5	10
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20	25	30
Leu Pro Gly Asp Ile Gln Val Val Pro Ile Gly Val Gly Pro Asn Ala		
35	40	45
Asn Val Gln Glu Leu Glu Arg Ile Gly Trp Pro Asn Ala Pro Ile Leu		
50	55	60
Ile Gln Asp Phe Glu Thr Leu Pro Arg Glu Ala Pro Asp Leu Val Leu		
65	70	75
Gln Arg		

<210> 5
<211> 73

<212> PRT

<213> Homo sapiens

<400> 5

Asp Arg Glu Gln Ala Pro Asn Leu Val Tyr Met Val Thr Gly Asn Pro
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20 25 30
Ile Gly Val Gly Pro Asn Ala Asn Val Gln Glu Leu Glu Arg Ile Gly
35 40 45
Trp Pro Asn Ala Pro Ile Leu Ile Gln Asp Phe Glu Thr Leu Pro Arg
50 55 60
Glu Ala Pro Asp Leu Val Leu Gln Arg
65 70

<210> 6

<211> 64

<212> PRT

<213> Homo sapiens

<400> 6

Asp Arg Glu Gln Ala Pro Asn Leu Val Tyr Met Val Thr Gly Asn Pro
1 5 10 15
Ala Ser Asp Glu Ile Lys Arg Leu Pro Gly Asp Ile Gln Val Val Pro
20 25 30
Ile Gly Val Gly Pro Asn Ala Asn Val Gln Glu Leu Glu Arg Ile Gly
35 40 45
Trp Pro Asn Ala Pro Ile Leu Ile Gln Asp Phe Glu Thr Leu Pro Arg
50 55 60

<210> 7

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> A sense primer used in RT-PCR for obtaining Asp1459-Arg1668 region of mature human VWF subunit

<400> 7

cgggatccga ccttgccccctt gaagcccccttc 30

<210> 8

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> An anti-sense primer used in RT-PCR for obtaining Asp1459-Arg1668 region of mature human VWF subunit

<400> 8

cggaattctc agtgatggtg atgggtatgc ctctgcagca ccaggtcagg a 51

<210> 9

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> A sense primer used in RT-PCR for obtaining Glu1554-Arg1668, Asp1587-Arg1668, Asp1596-Arg1668, and Asp1596-Arg1659 regions of mature human VWF subunit

<400> 9

cgggatccga ggcacagtcc aaaggggaca 30

<210> 10

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> A sense primer used in RT-PCR for obtaining Glu1554-Arg1668, Asp1587-Arg1668, Asp1596-Arg1668, and Asp1596-Arg1659 regions of mature human VWF subunit

<400> 10

cgggatccga ccacagcttc ttggtcagcc 30

<210> 11

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> A sense primer used in RT-PCR for obtaining Glu1554-Arg1668, Asp1587-Arg1668, Asp1596-Arg1668, and Asp1596-Arg1659 regions of mature human VWF subunit

<400> 11

cgggatccga ccgggagcag gcgcctaacc 30

<210> 12

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> An anti-sense primer used in RT-PCR for obtaining Glu1554-Arg1668, Asp1587-Arg1668, Asp1596-Arg1668, and Asp1596-Arg1659 regions of mature human VWF subunit

<400> 12

cggaaattctc agtgatggtg atggatgtt cggggagcg tctcaaagtc c 51